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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,999	10/06/2006	Kiyohiro Shimokawa	285290US3XPCT	9543
22850	7590	02/28/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER TRIEU, THAI BA	
			ART UNIT 3748	PAPER NUMBER
			NOTIFICATION DATE 02/28/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/565,999		SHIMOKAWA ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Thai-Ba Trieu		3748	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____                                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>01/27/2006</u>  | 6) <input type="checkbox"/> Other: ____                           |

## DETAILED ACTION

### *Drawings*

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

Applicant discloses "***According to the invention as claimed in claim 1/2/3***" (Page 12, lines 14 and 23, Page 13, line 6); however, claim may be amended or cancelled during the prosecution of the instant application, and therefore, is not an appropriate characterization of the invention.

### *Claim Suggestions*

Applicants are suggested to revise the following limitation for clarity:

- In claim 1, lines 4-5, "***a partition***" should be revised as -- ***an exhaust flow path partition*** --.
- In claim 1, line 5, "***exhaust***" should be revised as -- ***exhaust gas*** --.

- In claim 1, lines 9 and 10, "***a/the partition***" should be revised as – ***a/ the turbine scroll partition --***.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

***Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Heydrich (Patent Number 4,179,892) or Pierport (Patent Number 6,324,847 B1), in view of either Miyashita et al. (Patent Number JP 08246891 A) or Yoshitomi (Patent Number JP 06108842 A)***

Heydrich/Pierport discloses a turbocharger (31, 32 of Heydrich; 22 of Pierport) mounted on an engine (10 of Heydrich; 10 of Pierport) and having an EGR pipe (56 of Heydrich; 40 of Pierport) through which part of exhaust gas is extracted from an exhaust manifold (18) to be recirculated to a suction pipe (22 of Heydrich; 16 of Pierport), characterized in that a turbine scroll is internally divided (49, 50 of Heydrich; 28, 38, 36 of Pierport), for continuity with outlet flow paths of the exhaust manifold, by a partition such that one of the divided flow paths by the partition which serves for extraction of the exhaust gas to be recirculated is smaller in flow-path cross-sectional area (49 of Heydrich; via 36 of Pierport) than the other flowpath which does not serve for extraction

of the exhaust gas to be recirculated (See Figure 1 of Heydrich; Figures 1-3, Column 4, lines 1-9 of Pierport).

However, Heydrich/Pierport fails to disclose the exhaust manifold being internally divided by a partition for prevention of exhaust interference between cylinders.

Miyashita/Yoshitomi teaches that it is conventional in the exhaust device for the engine art, to utilize a partition for internally dividing the exhaust manifold (13 of Miyashita; L of Yoshitomi) (See Figure 4 and Paragraph [0002]-[0003] of Miyashita of the machine translation; and Figure 1 and Abstract of Yoshitomi).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a partition, as taught by Miyashita/Yoshitomi, to provide an alternative arrangement of the exhaust manifold, which performs the same function of two separate exhaust manifold for preventing the exhaust gas interference between cylinders.

***Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heydrich (Patent Number 4,179,892)/Pierport (Patent Number 6,324,847 B1), in view of Miyashita et al. (Patent Number JP 08246891 A)/Yoshitomi (Patent Number JP 06108842 A), and further in view of either Takeda Toshio (Pub. Number JP 04-140425 A) or Birmann (Patent Number 3,355,878)..***

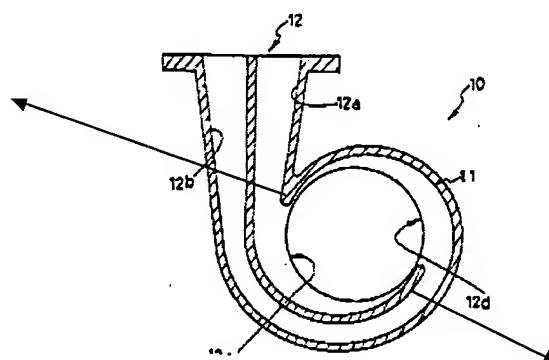
The modified Heydrich/Pierport discloses the invention as recited above; however fails to disclose tongues and their positions

Takeda Toshio/Birmann teaches that it is conventional in the turbocharger art, to utilize tongues (Not Numbered) being respectively provided at two circumferential

positions of the turbine scroll, an exhaust inflow range from the tongue near the exhaust inflow port to the tongue away from the exhaust inflow port providing a throat portion only for one of the flow paths, the remaining exhaust inflow range from the tongue away from the exhaust inflow port back to the tongue near the exhaust inflow port providing a throat portion only for the other flow path (See Figure 1 of Takeda Toshio, Figure 2 of Birmann).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized tongues and their positions, as taught by Takeda Toshio/Birmann, to improve the efficiency of the modified Heydrich/Pierport device, since the use thereof would have delivered the desired exhaust gas flow to each throat portion of the turbine with respect to the condition of engine speed/operation.

the tongue near the  
exhaust inflow port



the tongue away from the  
exhaust inflow port

***Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heydrich (Patent Number 4,179,892)/Pierport (Patent Number 6,324,847 B1), in view of Miyashita et al. (Patent Number JP 08246891 A)/Yoshitomi (Patent Number JP 06108842 A), and further in view of Yano (Patent Number 4,780,054).***

The modified Heydrich/Pierport discloses the invention as recited above; however fails to disclose a throat of the turbine scroll being provided with a number of angularly adjustable nozzle vanes.

Yano teaches that it is conventional in the turbocharger art, to utilize a throat of the turbine scroll being provided with a number of angularly adjustable nozzle vanes (34) (See Figures 1-2).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a throat of the turbine scroll being provided with a number of angularly adjustable nozzle vanes, as taught by Yano, to improve the efficiency of the modified Heydrich/Pierport device, since the use thereof would have controlled the exhaust gas flow into the turbine.

***Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heydrich (Patent Number 4,179,892)/Pierport (Patent Number 6,324,847 B1), in view of Miyashita et al. (Patent Number JP 08246891 A)/Yoshitomi (Patent Number JP 06108842 A) and Takeda Toshio (Pub. Number JP 04-140425 A), and further in view of Yano (Patent Number 4,780,054).***

The modified Heydrich/Pierport discloses the invention as recited above; however fails to disclose a throat of the turbine scroll being provided with a number of angularly adjustable nozzle vanes.

Yano teaches that it is conventional in the turbocharger art, to utilize a throat of the turbine scroll being provided with a number of angularly adjustable nozzle vanes (34) (See Figures 1-2).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a throat of the turbine scroll being provided with a number of angularly adjustable nozzle vanes, as taught by Yano, to improve the efficiency of the modified Heydrich/Pierport device, since the use thereof would have controlled the exhaust gas flow into the turbine.

### ***Prior Art***

The IDS (PTO-1449) filed on January 27, 2006 has been considered. An initialized copy is attached hereto.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (571) 272-4867. The examiner can normally be reached on Monday - Thursday (6:30-5:00).



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TTB  
February 02, 2008



Thai-Ba Trieu  
Primary Examiner  
Art Unit 3748